# ALASKA DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES





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# 2017 Preliminary Kuskokwim Area Salmon Season Summary

# **Kuskokwim Area Management**

The 2017 fishing season was the second consecutive year since statehood that there were no large scale commercial salmon buyer/processors in the Kuskokwim Area. This resulted in very little opportunity for fishermen in District 1 and no opportunity for fishermen in District 4 (Quinhagak) and District 5 (Goodnews Bay).

#### **Kuskokwim River**

### **Preseason Forecast and Inseason Subsistence Management**

The 2017 Kuskokwim River Chinook salmon forecast was for a total run of 132,000–222,000 fish. The drainagewide Chinook salmon sustainable escapement goal (SEG) is 65,000–120,000 fish. Average subsistence Chinook salmon harvest is 84,000 fish.

Preseason management actions including early season subsistence fishing closures, tributary closures, time and area restrictions, gillnet mesh size and length restrictions, and live release requirements were jointly recommended by the Alaska Department of Fish and Game (ADF&G) and the United States Fish and Wildlife Service (USFWS) in an effort to achieve escapement goals. The Kuskokwim River Salmon Management Working Group (Working Group) and the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) voted to support the management actions.

An early season subsistence fishing closure was initiated on May 20 from the mouth of the Kuskokwim River up to Tuluksak; May 25 from Tuluksak up to the Yukon Delta Refuge Boundary at Aniak; June 1 from the Yukon Delta boundary at Aniak up to the Holitna River mouth and upstream of Holitna River mouth beginning June 4, 2017. With the closure came additional restrictions, including tributary closures and live release of Chinook salmon requirements. During the front end closure there were three gillnet opportunities with 4-inch or

less mesh to allow subsistence fishers to harvest non-salmon species. These openings occurred on May 27, June 3, and June 10.

Beginning June 12, the Federal Subsistence Board adopted a Special Action to close the Kuskokwim Chinook salmon fishery to non-Federally qualified users within the boundary of the Yukon Delta National Wildlife Refuge (NWR). The USFWS managed the subsistence fishery within the Yukon Delta NWR through July 6 at which time ADF&G resumed management of the entire Kuskokwim River.

Subsistence management under ADF&G consisted of a June 12, 24 hour 6-inch or less mesh, 25 fathom gill net opportunity from the refuge boundary at Aniak to the Holitna River and removal of subsistence gillnet restriction in waters upstream of the Holitna River. Two 12 hour 6-inch or less mesh, 25 fathom gillnet opportunities occurred on June 24 and July 3 in state waters from Aniak to the Holitna River mouth. Beginning July 8, the entirety of the mainstem of the Kuskokwim River was open to 6-inch or less mesh, 25 fathoms in length until further notice. Mainstem gear restrictions were removed on July 27 and the tributary restrictions were finally lifted on August 17. The tributary restrictions were kept in place beyond the mainstem restrictions for the purpose of conservation while Chinook salmon were on their spawning grounds.

Postseason subsistence harvest surveys are presently being conducted. An assessment of subsistence salmon harvest in 2017 will not be available until after postseason harvest surveys have been completed, data have been analyzed, and preliminary harvest estimates are produced.

#### **District 1 Commercial Fishery**

#### 2017 Commercial Harvest Outlook and Harvest

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Chum</u>
2017 Outlook	0	5,000-20,000	80,000-140,000	100,000-150,000

Short commercial fishing opportunities directed at coho salmon were provided in the Kuskokwim River on July 30, August 14, and August 17 resulting in well below average harvests. Participants included those commercial fishermen who had registered with the department as catcher/sellers and had secured their own markets. Due to the small number of participants during these commercial fishing periods State of Alaska confidentially requirements prohibit release of the harvest.

# **Run Timing and Escapement**

#### **Chinook Salmon**

The preliminary Kuskokwim River total run estimate is approximately 165,102 Chinook salmon (95% CI: 128,864–211,530). The Kuskokwim River drainagewide escapement goal was likely achieved, but will not be fully assessed until after all data has been analyzed this winter.

Due to the early season subsistence fishery closures, Bethel Test Fish (BTF) was limited as an indicator of Chinook salmon run timing. Subsistence harvest is historically weighted towards the beginning of the run, and the lack of this early season fishery resulted in the evaluation of a larger proportion of the early run than other years on record. Run timing was late based on BTF.

Chinook salmon escapement at Kogrukluk and George River weirs exceeded their respective SEG ranges and escapement at Kwethluk River weir was within the SEG (Table 1). Seven tributaries have aerial survey SEGs and of these five tributaries were within the respective SEG ranges and two were either below the SEG or weather prevented the survey from being conducted (Table 2).

## **Sockeye Salmon**

Based on BTF, sockeye salmon run timing was late. Overall, sockeye salmon escapement was well above average across the drainage. The Kogrukluk River weir has the only established sockeye salmon escapement goal with 2017 escapement achieving the SEG. The Telaquana weir observed the highest escapement of sockeye salmon since the project was established in 2010 (Table 3).

#### **Chum Salmon**

Chum salmon run timing at BTF was late and all escapement projects showed an above average run. Escapement at the Kogrukluk River weir exceeded the established SEG (Table 4).

#### Coho Salmon

High water conditions hampered efforts to assess the coho salmon run at escapement projects drainagewide. Coho salmon passage at the Kwethluk River weir met the SEG for that system. Counts at Kogrukluk River weir are considered incomplete due to high water (Table 5).

## **Kuskokwim Bay**

# **District 4 (Quinhagak)**

There were no commercial salmon fishing periods in District 4 during the 2017 season due to a lack of processing capacity.

#### **Run Timing and Escapement**

The Kanektok River weir was not operated in 2017 due to a lack of funding. Subsequently, aerial surveys were not conducted due to poor weather conditions during the established survey period.

#### **District 5 (Goodnews Bay)**

There were no commercial salmon fishing periods in District 5 during the 2017 season due to a lack of processing capacity.

## **Run Timing and Escapement**

The Middle Fork Goodnews River Chinook salmon biological escapement goal (BEG) of 1,500–2,900 fish was exceeded with an escapement of 6,576 fish (Table 7). The sockeye salmon BEG (range 18,000–40,000) was exceeded with an escapement of 179,452 fish. The chum salmon lower bound SEG of 12,000 was also exceeded with escapement of 41,729 fish (Table 7). The Middle Fork Goodnews River weir was removed on July 31 due to a loss of funding that would cover weir operations through the end of August. An aerial survey of the North Fork Goodnews River was not conducted due to poor weather conditions during the established survey period (Table 7).

Table 1.-Chinook salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2007–2017.

		Chinook Salmon Escapement								
		Salmon								
Year		Kwethluk	Tuluksak	(Aniak)	George	Kogrukluk	Tatlawiksuk	(Pitka)		
2007		12,927	374	6,255	4,011	a	2,032	a		
2008		5,276	701	2,376	2,563	9,750	1,075	a		
2009		5,744	362	1,656	3,663	9,528	1,071	a		
2010		1,667	201	a	1,498	5,812	546	a		
2011		4,079	288	a	1,547	6,731	992	a		
2012		a	555	a	2,201	a	1,116	a		
2013		a	193	625	1,292	1,819	495	a		
2014		3,187	320	1,757	2,993	3,732	1,904	a		
2015		8,163	709	2,285	2,281	7,639	2,095	6,736		
2016		3,555	909	a	1,663	7,056	2,494	6,326		
2017	b	7,404	609	2,446	3,671	9,984	2,174	8,003		
SEC		4,100-			1,800-	4,800-				
SEG		7,500			3,300	8,800				
Average										
2007–2016		5,575	475	2,486	2,371	6,508	1,382	6,531		

<sup>&</sup>lt;sup>a</sup> Weir did not operate or counts were incomplete.
<sup>b</sup> Preliminary numbers subject to change.

Table 2.-Chinook salmon spawning aerial survey index estimates, Kuskokwim River Drainage, Kuskokwim Management Area, 2007–2017.

	Lower Kuskokwim River <sup>a</sup>					Middle Kuskokwim River <sup>a</sup>				Upper Kuskokwim River <sup>a</sup>				
_		Kwethluk											Salmon	Bear
Year	Eek	Canyon C.	Kisaralik	Tuluksak	Aniak	Kipchuk	Salmon	Holokuk	Oskawalik	Holitna	Gagarayah	Cheeneetnuk	(Pitka)	(Pitka)
2007	b	b	692	173	3,984	2,147	1,458	146	b	b	1,035	b	943	165
2008	b	487	1,074	b	3,222	1,061	589	190	213	b	177	290	1,305	245
2009	b	b	b	b	b	b	b	390	379	b	303	323	632	209
2010	b	b	235	b	b	b	b	108	b	587	62	b	135	75
2011	263	b	534	b	b	116	79	20	26	b	96	249	767	145
2012	b	b	610	b	b	193	49	9	51	b	178	229	670	b
2013	240	1,165	597	83	754	261	154	29	38	670	74	138	475	64
2014	206	b	622	b	3,201	1,220	497	80	200	1,785	359	340	1,865	b
2015	b	b	709	b	b	917	810	77	b	662	19	b	2,016	1,381
2016	b	b	622	b	718	898	b	100	47	1,157	135	217	1,578	580
2017	b	b	b	b	1,781	889	423	140	136	676	453	660	687	492
Escapement			400-		1,200-		330-			970–	300-	340-	470-	
Goal Range:			1,200		2,300		1,200			2,100	830	1,300	1,600	
Average														
2007-2016	236	826	633	128	2,376	852	519	115	136	972	244	255	1,039	358

<sup>&</sup>lt;sup>a</sup> Estimates are from aerial surveys conducted during peak spawning periods under 'good' or 'fair' survey conditions.
<sup>b</sup> Survey was either not flown or did not meet acceptable survey criteria.

Table 3.-Sockeye salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2007–2017.

		Sockeye Salmon Escapement							
Year	-	Kwethluk	Tuluksak	George	Kogrukluk	Tatlawiksuk	Telaquana	Salmon (Aniak)	
2007		5,148	352	65	17,211	25	a	2,189	
2008		2,451	188	92	19,675	39	a	1,181	
2009		4,230	686	54	22,826	39	a	1,366	
2010		4,188	437	113	17,139	28	72,021	a	
2011		2,031	130	43	7,974	15	35,105	a	
2012		a	189	79	a	9	22,994	924	
2013		a	394	150	7,808	37	27,806	966	
2014		3,778	514	156	6,413	9	23,820	894	
2015		8,975	824	139	6,362	0	91,164	1,461	
2016		20,495	1,509	2,778	20,087	240	82,706	254	
2017	b	30,925	4,070	912	16,328	59	138,400	1,440	
SEG					4,400-17,00	00			
Average									
2007–2016		6,412	522	367	13,944	44	50,802	1,154	

<sup>&</sup>lt;sup>a</sup> Weir did not operate or counts were incomplete.
<sup>b</sup> Preliminary numbers subject to change.

Table 4.—Chum salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2007-2017.

		Chum Salmon Escapement							
Year	Kwethluk	Tuluksak	George	Kogrukluk	Tatlawiksuk	Aniak	Salmon (Aniak)		
2007	54,913	17,286	61,531	52,961	83,484	696,801	25,340		
2008	20,030	12,550	29,396	44,744	30,129	427,911	9,459		
2009	32,191	13,671	7,944	82,483	19,975	479,531	9,392		
2010	19,222	13,042	26,275	69,258	37,737	429,643	a		
2011	18,329	10,011	46,650	76,823	88,202	345,630	a		
2012	a	16,981	33,310	a	44,569	a	a		
2013	a	12,911	37,879	65,644	32,249	a	7,723		
2014	17,941	8,726	17,148	30,763	12,455	a	2,890		
2015	23,039	6,337	17,415	31,657	10,008	a	5,392		
2016	22,914	5,868	20,834	45,329	10,564	a	817		
2017	b 55,052	22,395	38,159	59,232	28,638	a	9,010		
SEG				15,000-		222,000-	_		
SEC				49,000		480,000			
Average									
2007–2016	26,072	11,738	29,838	55,518	36,937	475,903	8,716		

<sup>&</sup>lt;sup>a</sup> Weir did not operate or counts were incomplete.
<sup>b</sup> Preliminary numbers subject to change.

Table 5.-Coho salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area, 2007–2017.

	Coho Salmon Escapement							
Year	Kwethluk	Tuluksak	George	Kogrukluk	Tatlawiksuk	Salmon (Aniak)		
2007	19,473	2,807	28,398	26,423	8,500	a		
2008	48,049	7,457	21,931	29,237	11,022	10,974		
2009	21,911	8,137	12,490	22,289	10,148	6,351		
2010	a	1,525	12,639	14,689	3,773	a		
2011	a	a	29,120	21,800	14,184	a		
2012	20,895	4,407	14,478	13,421	8,015	a		
2013	a	6,490	15,308	21,207	12,764	2,797		
2014	43,945	13,797	35,771	52,975	19,814	8,254		
2015	24,367	7,158	33,642	29,277	17,319	a		
2016	28,852	1,857	a	a	11,897	560		
2017	b 46,577	28,921	20,616	a	a	a		
SEG	>19,000			13,000-				
	,			28,000				
Average 2007–2016	29,642	5,959	22,642	25,702	11,744	5,787		

<sup>&</sup>lt;sup>a</sup> Weir did not operate or counts were incomplete.

<sup>b</sup> Preliminary numbers subject to change.

Table 6.-Kanektok River salmon spawning escapement estimates, 2007-2017.

		Weir Esc	Aerial Surve	Aerial Survey Escapement		
Year	Chinook	Sockeye	Coho	Chum	Chinook <sup>a</sup>	Sockeye <sup>b</sup>
2007	13,965	304,086	c	131,000	d	d
2008	c	c	c	c	3,659	38,900
2009	7,065	305,756	c	55,846	d	d
2010	6,537	204,954	c	68,186	1,228	16,950
2011	5,170	88,177	c	53,050	d	d
2012	1,561	115,021	c	28,726	d	d
2013	3,569	128,761	c	43,040	2,346	64,802
2014	3,594	259,406	c	18,602	1,871	148,800
2015	10,416	106,751	c	15,048	4,919	39,970
2016	c	c	c	c	5,631	80,160
2017	c	c	c	c	d	d
Average						
2007–2016	6,485	189,114		51,687	3,276	64,930

a Chinook salmon SEG is 3,500–8,000 fish.
b Sockeye salmon SEG is 14,000–34,000 fish.
c Weir did not operate or counts were incomplete.
d Survey was either not flown or did not meet acceptable survey criteria.

Table 7.-Salmon spawning escapement estimates, Goodnews River Drainage, Kuskokwim Bay, 2007-2017.

	Middle	Fork Goodne	ws R. Weir Es	ement NorthFork Goodnews R. Aerial Escape		
Year	Chinook	Sockeye	Coho	Chum	Chinook	Sockeye
2007	3,914	73,768	19,442	50,232	a	a
2008	2,223	43,879	37,690	39,548	2,155	32,500
2009	1,669	27,494	19,123	19,236	a	a
2010	2,176	36,574	26,287	24,789	a	a
2011	2,045	19,643	24,668	19,974	853	14,140
2012	524	29,531	13,679	9,065	378	16,710
2013	1,187	23,545	b	27,682	a	a
2014	750	41,473	5,294	11,518	630	a
2015	1,398	54,383	15,084 °	10,885	991	38,390
2016 <sup>d</sup>	3,767	170,574	b	41,815	1,120	90,060
2017 <sup>d,e</sup>	6,576	179,452	b	41,729	a	a
Ess Cast	1,500-	18,000-				
Esc Goal	2,900	40,000	>12,000	>12,000	640-3,300	5,500-19,500
Average						
2007–2016	1,965	52,086	20,158	25,474	1,021	38,360

<sup>&</sup>lt;sup>a</sup> Survey was either not flown or did not meet acceptable survey criteria.

<sup>b</sup> Weir did not operate or counts were incomplete.

<sup>c</sup> Weir operations ended Aug 31.

<sup>d</sup> Weir operations ended July 31.

<sup>e</sup> Preliminary numbers subject to change.